

CLAIMS

1. Electric motor with a hollow shaft (1) connected to a rotor (4) of the electric motor, characterized in that for supplying electric energy to the electric motor, a converter (11) and a corresponding electronic control circuit (13) are integrated at least partially in a hollow space (2) inside the hollow shaft (1), wherein the converter (11) and the electronic control circuit (13) are mounted stationarily.
2. Electric motor according to claim 1, characterized in that the converter (11) and the associated electronic control circuit (13) are completely integrated in the hollow space (2) inside the hollow shaft (1).
3. Electric motor according to one of the preceding claims, characterized in that the converter (11) is mounted on a bearing shield (6) of the motor.
4. Electric motor according to one of the preceding claims, characterized in that a transducer is integrated in the hollow space (2) inside the hollow shaft (1).
5. Electric motor according to claim 4, characterized in that at least one signal track (9) of the transducer is arranged on the inside of the hollow shaft (1).
6. Electric motor according to claim 4 or 5, characterized in that the transducer is implemented as a magnetic, inductive, optical or capacitive transducer.
7. Electric motor according to claim 4, 5 or 6, characterized in that the electronic evaluation circuit of the transducer is partially or completely integrated in the hollow space (2) inside the hollow shaft (1).

8. Electric motor according to one of the preceding claims, characterized in that fan blades (8) are attached to the inside of the hollow shaft (1) of the motor.
9. Electric motor according to one of the preceding claims, characterized in that the converter is implemented as a converter without a DC-link capacitor, in particular as a matrix converter.
10. Machine-tool or production machine with the electric motor according to one of the claims 1 to 9.